

Chapter 4

Impairment of assets

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CREATING GREAT OUTCOMES

through professional qualification training
and study abroad services and preparation

Main contents

- ◆ Impairment of assets (IAS 36) 减值
- ◆ Cash generating units (IAS 36)

➤ What is impairment of assets (IAS 36)?

An asset is impaired if its **carrying value (CV)** is **greater** than its **recoverable amount**.

NRV net realizable value

如果资产的账面价值 (cv) 大于其回收率, 则资产减值。

Recoverable amount

Higher of

未来现金流的折现之和

FV less
costs to sell

Value in Use =

$$\frac{CF_1}{1+r} + \dots + \frac{CF_n}{(1+r)^n}$$

where, r = 折现率

CF: Cash Flow

Sum of PV of estimated
future cash flows

未来现金流和折现之和

➤ Impairment review frequency 减值测试 *indefinite*

- I. For **unamortized** intangibles and goodwill, review annually.
- II. For **amortized** intangibles, review happens when there are indicators of impairment 减值信号

➤ Indicators of impairment

✓ External

- I. Significant fall in market value
- II. External adverse changes (economy, technology, market)
- III. Increase in market interest rates that reduce the value in use.

✓ Internal 可作折现率

- I. Obsolescence/damage
- II. Actual cash flow lower than expected
- III. The asset is not used as much in the business as it once was
- IV. Plans to discontinue or restructure operations

➤ Accounting treatment of an impairment

✓ SOFP

The assets to be written down to recoverable amount

✓ SOPL

The impairment loss to be charged to P/L

Exception: if the impairment reserves a previous gain, then the impairment would be taken to the revaluation reserve firstly.

✓ Journals

Dr Revaluation reserve ((1st)	(deduct from equity)
Dr impairment loss (balance)	(deduct from profit)
Cr CV of asset	(reduction of asset)

	A	B	C
Carrying amount	100	150	120
Net realizable value	110	125	100
Value in use	120	130	90
Recoverable amount	120	130	100
Impairment loss	0	20	20

Example 1

An entity owns a property which was originally purchased for \$300. After that the property has been revalued to \$500. Now the property has a current carrying value of \$460 but the recoverable amount of the property has just been estimated at only \$200. What is the impairment amount and how should this be treated in the financial statement.

$$\text{Impairment} = 460 - 200 = 260$$

other comprehensive income → *revaluation reserve*

Dr Revaluation gain 200 (OCI, RK-SoFP)

Dr Impairment loss 60 (Expense — P/L)

Cr Carrying value 260 (PPE) → SoFP

Example 2

When conducting the impairment test for an asset, it is estimated that the expected future cash flows were \$8,500 per annum for the next five years. The current cost of capital is 10% and a five year annuity of \$1 per annum at 10% would have a present value of \$3.79. what is the value in use of the asset?

$$VIU = \frac{8500}{1+10\%} + \dots + \frac{8500}{(1+10\%)^5} = \rightarrow r=3.79 \text{ 年金系数}$$

Value in use= sum of present value of future cash flow
 $= 8500/1.1 + 8500/1.1^2 + 8500/1.1^3 + 8500/1.1^4 + 8500/1.1^5$
 $= 8500 * 3.79 \text{ (annuity)}$

➤ Reverse of an impairment loss

✓ Indicators of impairment reversal

External indicators

- I. Increases in the asset's market value.
- II. Favorable changes in the technological, market, economic or legal environment.
- III. Decreases in interest rates.

✓ Internal indicators

- I. Favorable changes in the use of the asset.
- II. Improvements in the asset's economic performance.

从哪减的从哪加回

✓ Calculation of impairment reversal

- I. This reversal is **recognized as income** in P&L. If the original impairment was charged against the revaluation surplus, it is credited to the revaluation reserve.
- II. The carrying amount of an asset must not be increased above the **lower of** 孰低
 - a) Its **recoverable amount**; 假设当初没有减值, 正常折现到现在的账面
 - b) The **CV** that would have been determined (net of 价值 amortization or depreciation) had no impairment loss been recognized for the asset in prior periods.
- III. Previous goodwill impairment cannot be reversed.
- IV. The depreciation charge for future periods should be revised to reflect the changed carrying amount.

Example

成本模型

Boxer purchased a noncurrent asset on 1 January 20X1 at a cost of \$30,000. At that date, the asset had an estimated useful life of ten years. Boxer does not revalue this type of asset, but accounts for it on the basis of depreciated historical cost. At 31 December 20X2, the asset was subject to an impairment review and had a recoverable amount of \$16,000. At 31 December 20X5, the circumstances which caused the original impairment to be recognized have reversed and are no longer applicable, with the result that recoverable amount is now \$40,000.

Explain, with supporting computations, the impact on the financial statements of the two impairment reviews..

Year ended 31 December 20X2

Asset carrying value
Recoverable amount
Impairment loss

Dr: P/L 8,000
Cr: PPE 8,000

$$\begin{array}{r} 30,000 * 8/10 = 24,000 \\ \underline{16,000} \\ 8,000 \end{array}$$

Year ended 31 December 20X5

Asset carrying value
Recoverable amount

$$\begin{array}{r} 16,000 * 5/8 = 10,000 \\ 40,000 \end{array}$$

- ✓ If there never had been an earlier impairment loss, asset CV in 31 December 20X5 should have been: $30,000 * 5/10 = 15,000$
 - ✓ The carrying value of the asset (10,000) can not be increased above the lower of
 - a. Its recoverable amount (40,000)
 - b. The CV amount (15,000)
 - ✓ Only \$5,000 original impairment can be reversed and be recognized in profit or loss.
 - ✓ The asset will be increased by \$5,000.
- Dr: PPE 5,000*
Cr: P/L 5,000

◆ Cash generating units 现金产出单元

➤ Definition

- ✓ A CGU is the **smallest identifiable group of assets** which generates cash inflows **independent** of those **of other assets**.
- ✓ Where not possible to estimate the recoverable amount (RA) of an individual asset, estimate RA of the cash-generating unit to which it belongs.

➤ Example

A subsidiary, a line of business 子公司, 产品线

➤ Impairment of CGU

- I. The value of CGU is the lower of **carrying amount** (of all assets in CGU) and **recoverable amount**.
- II. Recoverable amount is the higher of VIU and FV less cost to sale.

➤ Allocation of impairment loss of a CGU

- I. Purchased goodwill
- II. The other assets based on the CV of each asset in the CGU.

Note: 先减明显减值
if there exists Specific obvious impairment, impair it first.

	CV(\$m)	Impairment	Impaired value 账面价值
Goodwill	20	20 ③	0
Technology (worthless)	5	5 ②	0
brands	10	5 ($45 \times 10 / 90$)	5
Land	50 ④	25 ($45 \times 50 / 90$)	25
Buildings	30	15 ($45 \times 30 / 90$)	15
CGU	115	70 ①	45

Exercise-2012 Jun Q4

On 31 March 2012, there was an industrial accident that caused damage to some of Tilda's plant. The assets of Tilda immediately before the accident were:

	\$'000	
Goodwill	1,800	} before impairment
Patent 只减值200, 不参与后续减值分配	1,200	
Factory building	4,000	
Plant	3,500	
Receivables and cash 不参与减值分配, 无减值	1,500	
	<hr/>	
	12,000	

As a result of the accident, the recoverable amount of Tilda is \$6.7 million. The explosion destroyed (to the point of no further use) an item of plant that had a carrying amount of \$500,000. Tilda has an open offer from a competitor of \$1 million for its patent. The receivables and cash are already stated at their fair values less costs to sell (net realizable values).

What is the impairment loss of Tilda ?

Reasonable

公开市场公开报价
MV = NRV

	A	B	C	D	E	F
1			P/L Impairment			
2		current CV	Obvious	allocated	CV after impairment	
3	Goodwill	1,800		(1,800)		
4	Patent	1,200	(200)	reasomable, no allocted	1,000	
5	building	4,000		(1,600)	2,400	
6	Plant A (destroy)	500	(500)		0	
7	Plant B	3,000		(1,200)	1,800	
8	receviables and cash	1,500		reasomable, no allocted	1,500	
9	Total	12,000			6,700	
10						
11	Total impairment	12,000-6,700=5,300				
12		5,300-1,800-200-500=2,800				
13						

total impairment is 12m-6.7m=5.3m

\$'000	before impairment	obvious impairment	allocation impairment	impaired amount
Goodwill	1800	1800	0	0
Patent	1200	200	0	1000
Factory building	4000	0	2400 (2800*4/7)	1600
Plant	3500	500	1800 (2800*3/7)	1200
Receivables and cash	<u>1500</u>	<u>0</u>	<u>0</u>	<u>1500</u>
	12000	2500	2800	6700

A division of an entity has the following balances in its financial statements:

Goodwill ✓ \$700,000

Plant ① \$950,000

Building \$2,300,000

Intangibles ② \$800,000

Other net assets \$430,000

市场数据表明 building 没有减值, 不能对其
减值分配

reasonable

Following a period of losses, the recoverable amount of the division is deemed to be \$4 million. A recent valuation of the building showed that the building has a market value of \$2.5 million. The other net assets are at their recoverable amount. The entity uses the cost model for valuing building and plant.

What is the balance on the building following the impairment review?

What is the balance on plant following the impairment review?

	Before impairment	impairment loss	After impairment
Goodwill	\$700,000	\$700,000	\$0
Plant	\$950,000	\$260,571	\$689,429
Building	\$2,300,000	\$0	\$2,300,000
Intangibles	\$800,000	\$219,429	\$580,571
Other net assets	\$430,000	\$0	\$430,000
Total	\$5,180,000	\$1,180,000	\$4,000,000

Exercise

- Exam kit-Section A

T22-29